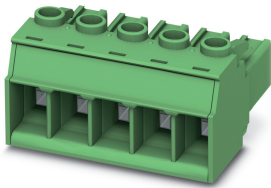


# Printed-circuit board connector - PC 5/ 3-ST1-7,62 BG BDL1-L3 - 1798731

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PCB connector, nominal cross section: 6 mm<sup>2</sup>, color: Pebble gray, nominal current: 41 A, rated voltage (III/2): 1000 V, contact surface: Tin, type of contact: Female connector, Number of potentials: 3, Number of rows: 1, Number of positions per row: 3, number of connections: 3, product range: PC 5/...-ST1, pitch: 7.62 mm, connection method: Screw connection with tension sleeve, conductor/PCB connection direction: 0 °, Locking clip: - Locking clip, plug-in system: POWER COMBICON 5, Locking: without, type of packaging: packed in cardboard

The figure shows a 5-pos. version of the product

## Your advantages

- ✓ Well-known connection principle allows worldwide use
- ✓ Low temperature rise, thanks to maximum contact force
- ✓ Allows connection of two conductors
- ✓ Integrated double steel spring provides additional safety in the event of temperature and power fluctuations
- ✓ 600 V UL approval in the smallest of dimensions



## Key Commercial Data

Packing unit	50 pc
GTIN	
GTIN	4046356662604

## Technical data

### Item properties

Brief article description	PCB connector
Plug-in system	POWER COMBICON 5
Type of contact	Female connector
Range of articles	PC 5/...-ST1
Pitch	7.62 mm
Number of positions	3
Drive form screw head	Philipps recess with slotted Torx (H1L)
Screw thread	M3

# Printed-circuit board connector - PC 5/ 3-ST1-7,62 BG BDL1-L3 - 1798731

## Technical data

### Item properties

Locking	without
Number of levels	1
Number of connections	3
Number of potentials	3

### Electrical parameters

Nominal current	41 A
Nom. voltage	1000 V
Rated voltage (III/3)	1000 V
Rated voltage (III/2)	1000 V
Rated voltage (II/2)	1000 V
Rated surge voltage (III/3)	8 kV
Rated surge voltage (III/2)	8 kV
Rated surge voltage (II/2)	6 kV

### Connection capacity

Connection method	Screw connection with tension sleeve
pluggable	Yes
Conductor cross section solid	0.2 mm <sup>2</sup> ... 10 mm <sup>2</sup>
Conductor cross section flexible	0.2 mm <sup>2</sup> ... 6 mm <sup>2</sup>
Conductor cross section AWG / kcmil	24 ... 10
Conductor cross section flexible, with ferrule without plastic sleeve	0.25 mm <sup>2</sup> ... 6 mm <sup>2</sup>
Conductor cross section, flexible, with ferrule, with plastic sleeve	0.25 mm <sup>2</sup> ... 4 mm <sup>2</sup>
2 conductors with same cross section, solid	0.2 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
2 conductors with same cross section, flexible	0.2 mm <sup>2</sup> ... 4 mm <sup>2</sup>
2 conductors with same cross section, flexible, with ferrule without plastic sleeve	0.25 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
2 conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve	0.25 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
Cylindrical gauge a x b / diameter	3.6 mm x 3.1 mm / 3.4 mm
Stripping length	10 mm
Torque	0.5 Nm ... 0.8 Nm ( $\leq 4 \text{ mm}^2$ is 0.5 Nm to 0.6 Nm, $> 4 \text{ mm}^2$ is 0.7 Nm to 0.8 Nm)

### Flange specifications

Type of locking	without
Mounting flange	without

### Material data - contact

Note	WEEE/RoHS-compliant, free of whiskers according to IEC 60068-2-82/ JEDEC JESD 201
Contact material	Cu alloy
Surface characteristics	hot-dip tin-plated

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## Technical data

### Material data - contact

Metal surface terminal point (top layer)	Tin (4 - 8 µm Sn)
Metal surface contact area (top layer)	Tin (4 - 8 µm Sn)

### Material data - housing

Housing color	Pebble gray (7032)
Insulating material	PA
Insulating material group	I
CTI according to IEC 60112	600
Flammability rating according to UL 94	V0
Glow wire flammability index GWFI according to EN 60695-2-12	850
Glow wire ignition temperature GWIT according to EN 60695-2-13	775
Temperature for the ball pressure test according to EN 60695-10-2	125 °C

### Dimensions for the product

Caption	Schematische Abbildung - weitere Details siehe Produktfamilienzeichnung im Download Center
Length [ l ]	35.25 mm
Width [ w ]	22.81 mm
Height [ h ]	19.7 mm
Pitch	7.62 mm
Height (without solder pin)	19.7 mm

### Packaging information

Type of packaging	packed in cardboard
Pieces per package	50
Denomination packing units	Pcs.

### General product information

Note	In accordance with IEC 61984, COMBICON connectors have no switching power (COC). During designated use, they must not be plugged in or disconnected when carrying voltage or under load.
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### Ambient conditions

Ambient temperature (storage/transport)	-40 °C ... 70 °C
Ambient temperature (assembly)	-5 °C ... 100 °C
Ambient temperature (operation)	-40 °C ... 100 °C (dependent on the derating curve)

### Termination and connection method

Test for conductor damage and slackening	IEC 60999-1:1999-11
	Test passed

### Pull-out test

Pull-out test	IEC 60999-1:1999-11
Conductor cross section / conductor type / tensile force	0.2 mm <sup>2</sup> / solid / > 10 N

# Printed-circuit board connector - PC 5/ 3-ST1-7,62 BG BDL1-L3 - 1798731

## Technical data

### Pull-out test

	0.2 mm <sup>2</sup> / flexible / > 10 N
	6 mm <sup>2</sup> / solid / > 80 N
	4 mm <sup>2</sup> / flexible / > 60 N
	6 mm <sup>2</sup> / flexible / > 80 N
	10 mm <sup>2</sup> / solid / > 90 N

### Mechanical tests according to standard

Test specification	IEC 61984
Visual inspection	IEC 60512-1-1:2002-02
Dimension check	IEC 60512-1-2:2002-02
Resistance of inscriptions	IEC 60068-2-70:1995-12
Insertion and withdrawal force	IEC 60512-13-2:2006-02
No. of cycles	50
Insertion strength per pos. approx.	8 N
Withdraw strength per pos. approx.	4 N
Polarization and coding	IEC 60512-13-5:2006-02
Contact holder in insert	IEC 60512-15-1:2008-05
Test force per pos.	29 N

### Air clearances and creepage distances

Clearances and creepage distances	IEC 60664-1:2007-04
Specification	IEC 60664-1:2007-04
Minimum clearance - inhomogeneous field (III/3)	8 mm
Minimum clearance - inhomogeneous field (III/2)	8 mm
Minimum clearance - inhomogeneous field (II/2)	5.5 mm
Minimum creepage distance value (III/3)	12.5 mm
Minimum creepage distance value (III/2)	5 mm
Minimum creepage distance value (II/2)	5 mm

### Current carrying capacity / derating curves

Caption	Type: PC 5/...-ST(F)1-7,62 with PC 5/...-G(F)U-7,62 Conductor cross section: 10 mm <sup>2</sup>
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### Mechanical tests (A)

Test specification	IEC 61984
Insertion strength per pos. approx.	8 N
Withdraw strength per pos. approx.	4 N
Polarization when inserted requirement >20 N	Test passed
Contact holder in insert requirements >20 N	Test passed

### Durability tests (B)

Specification	IEC 60512-9-1:2010-03
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# Printed-circuit board connector - PC 5/ 3-ST1-7,62 BG BDL1-L3 - 1798731

## Technical data

### Durability tests (B)

Contact resistance R <sub>1</sub>	0.4 mΩ
Insertion/withdrawal cycles	50
Contact resistance R <sub>2</sub>	0.4 mΩ
Impulse withstand voltage at sea level	7.3 kV

### Thermal tests (C)

Specification	IEC 60512-5-1:2002-02
Number of positions	12
Upper limiting temperature requirements <100 °C	Test passed

### Climatic tests (D)

Specification	ISO 6988:1985-02
Cold stress	-40 °C/2 h
Thermal stress	100 °C/168 h
Corrosive stress	0.2 dm <sup>3</sup> SO <sub>2</sub> on 300 dm <sup>3</sup> /40 °C/1 cycle
Impulse withstand voltage at sea level	7.3 kV
Power-frequency withstand voltage	3.31 kV

### Environmental and durability tests (E)

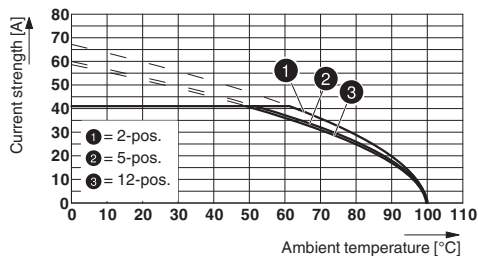
Specification	IEC 61984:2008-10
Result, degree of protection, IP code	Back of hand safety with IP10 access probe

### Environmental Product Compliance

China RoHS	Environmentally Friendly Use Period = 50 years
	For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration"

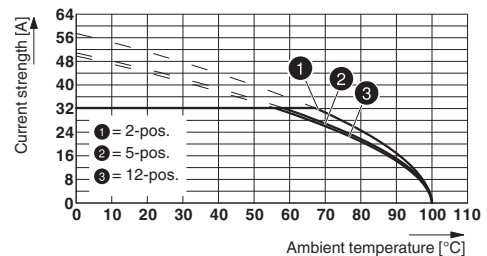
## Drawings

Diagram



Type: PC 5/...-ST(F)1-7,62 with PC 5/...-G(F)U-7,62  
 Conductor cross section: 10 mm<sup>2</sup>

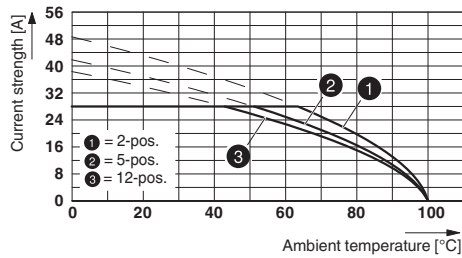
Diagram



Type: PC 5/...-ST(F)1-7,62 with PC 5/...-GU(F)-7,62  
 Conductor cross section: 6 mm<sup>2</sup>

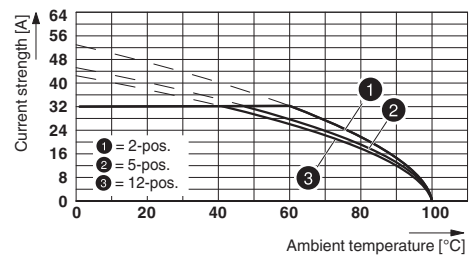
# Printed-circuit board connector - PC 5/ 3-ST1-7,62 BG BDL1-L3 - 1798731

Diagram



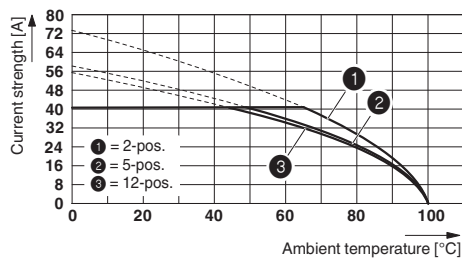
Derating curve for: PC 5/...-ST1-7,62 with PC 4/...-G-7,62  
Conductor cross section: 4 mm<sup>2</sup>

Diagram



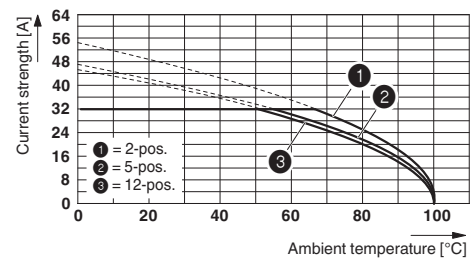
Derating curve for: PC 5/...-ST1-7,62 with PC 4/...-G-7,62  
Conductor cross section: 6 mm<sup>2</sup>

Diagram



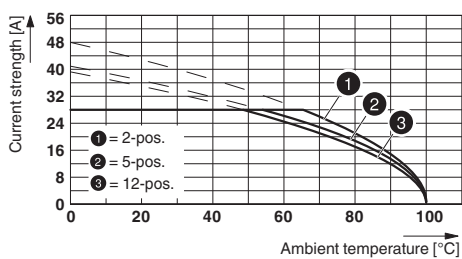
Derating curve for: PC 5/...-ST1-7,62 with PC 5/...-G-7,62  
Conductor cross section: 10 mm<sup>2</sup>

Diagram



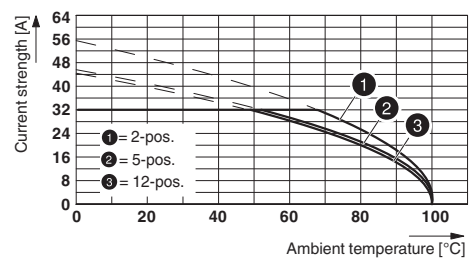
Derating curve for: PC 5/...-ST1-7,62 with PC 5/...-G-7,62  
Conductor cross section: 6 mm<sup>2</sup>

Diagram



Derating curve for: PC 5/...-ST1-7,62 with PCV 4/...-G-7,62  
Conductor cross section: 4 mm<sup>2</sup>

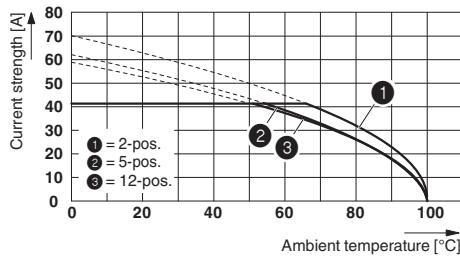
Diagram



Derating curve for: PC 5/...-ST1-7,62 with PCV 4/...-G-7,62  
Conductor cross section: 6 mm<sup>2</sup>

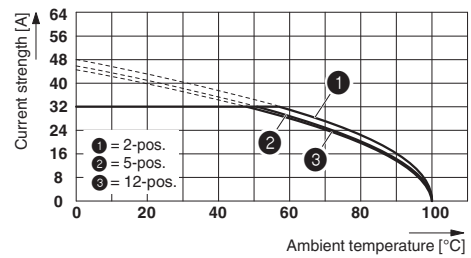
# Printed-circuit board connector - PC 5/ 3-ST1-7,62 BG BDL1-L3 - 1798731

Diagram



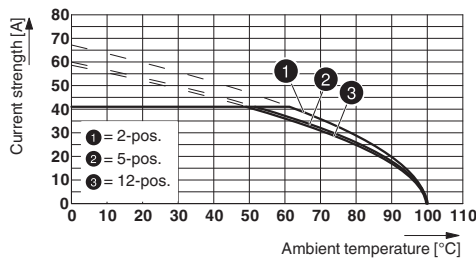
Derating curve for: PC 5/...-ST1-7,62 with PCV 5/...-G-7,62  
Conductor cross section: 10 mm<sup>2</sup>

Diagram



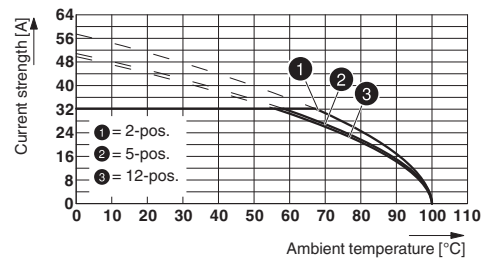
Derating curve for: PC 5/...-ST1-7,62 with PCV 5/...-G-7,62  
Conductor cross section: 6 mm<sup>2</sup>

Diagram



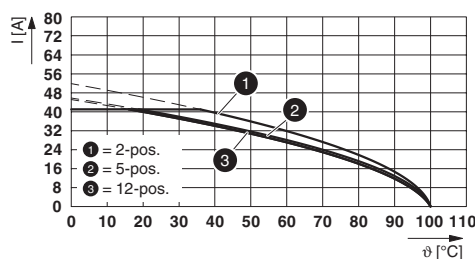
Type: PC 5/...-ST1-7,62 with PC 5/...-GU-7,62 P26 THT R..  
Conductor cross section: 10 mm<sup>2</sup>

Diagram



Type: PC 5/...-ST1-7,62 with PC 5/...-GU-7,62 P26 THT R..  
Conductor cross section: 6 mm<sup>2</sup>

Diagram



Type: PC 5/...-ST1-7,62 with IPC 5/...-ST-7,62

## Classifications

eCl@ss

eCl@ss 10.0.1	27440309
eCl@ss 11.0	27460202
eCl@ss 4.0	27260700
eCl@ss 4.1	27260700
eCl@ss 5.0	27260700
eCl@ss 5.1	27260700

# Printed-circuit board connector - PC 5/ 3-ST1-7,62 BG BDL1-L3 - 1798731

## Classifications

### eCl@ss

eCl@ss 6.0	27260700
eCl@ss 7.0	27440309
eCl@ss 9.0	27440309

### ETIM

ETIM 3.0	EC001121
ETIM 4.0	EC002637
ETIM 6.0	EC002638
ETIM 7.0	EC002638

### UNSPSC

UNSPSC 6.01	30211810
UNSPSC 7.0901	39121409
UNSPSC 11	39121409
UNSPSC 12.01	39121409
UNSPSC 13.2	39121409
UNSPSC 18.0	39121409
UNSPSC 19.0	39121409
UNSPSC 20.0	39121409
UNSPSC 21.0	39121409

## Approvals

### Approvals

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Approvals

EAC / cULus Recognized

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Ex Approvals

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### Approval details

EAC		B.01687
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# Printed-circuit board connector - PC 5/ 3-ST1-7,62 BG BDL1-L3 - 1798731

## Approvals

cULus Recognized		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	E60425-19920722
	B	C	
Nominal voltage UN	600 V	600 V	
Nominal current IN	41 A	41 A	
mm <sup>2</sup> /AWG/kcmil	24-8	24-8	

## Accessories

### Accessories

#### Coding element

Coding profile - CP-PC RD - 1701967



Coding profile, for plugging into the coding ribs of the plug at a later date, insulating material, color: Red

### Screwdriver tools

Screwdriver - SZS 0,6X3,5 - 1205053



Actuation tool, for ST terminal blocks, insulated, also suitable for use as a bladed screwdriver, size: 0.6 x 3.5 x 100 mm, 2-component grip, with non-slip grip

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